

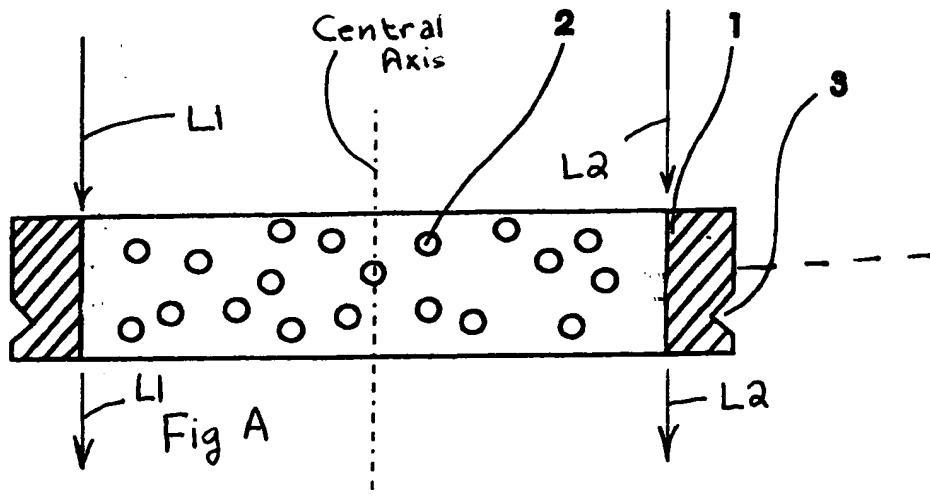
R E M A R K S

The Examiner has objected to the February 7, 2005 Amendment under 35 USC §132 as allegedly introducing new matter. Applicant respectfully requests reconsideration of this objection.

The language added on page 2 of the February 7, 2005 Amendment describes a function that is inherent to the structure described in the specification and as shown in Fig.

1. The significance of this language will be described below.

In Fig. A, below, which is reproduced from Applicant's Fig. 1, the connecting part 1 is shown without the subject tongue 5.



As indicated by the lines L1, L2 parallel to the central axis of the connecting part 1, air flowing in a path parallel to the central axis can move through the space at the interface between the filtering material and the surrounding surface of the connecting part 1 without passing through the filtering material to be effectively filtered.

As shown in Fig. B, below, which shows the connecting part 1 as seen in Applicant's Fig. 1, this same air flow traveling in the direction of lines L3, L4 parallel to the central axis at the interface is intercepted by the tongue and becomes diverted radially so that it travels through the filtering material.

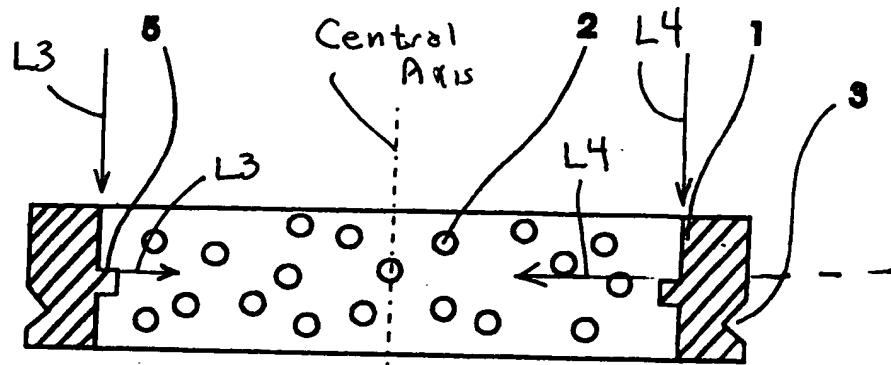


Fig. B

In Fig. C, below, a groove is shown on the connector part 1.

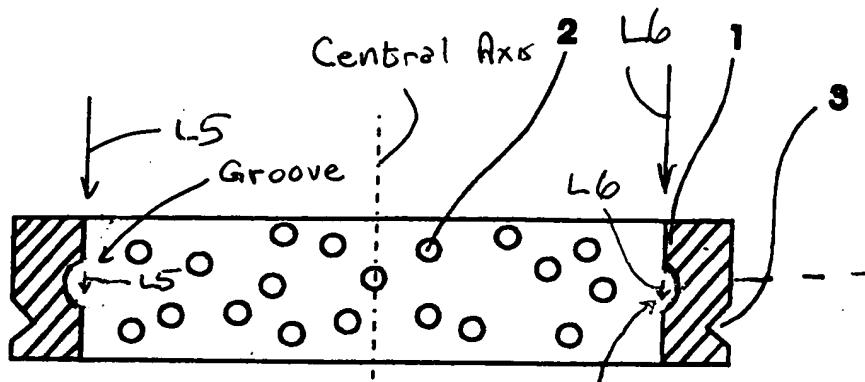


Fig C

Air flow in the same line, as indicated by L5, L6, at the interface would travel through the filtering material, at least at the axial extent of the groove, so as to be filtered thereby.

In short, the descriptive paragraph added does nothing more than explain the inherent function of the structure shown and described by the Applicant. Withdrawal of this objection is thus requested.

Claims 1, 2 and 4-15 are currently pending in the application. Claim 11 is hereby cancelled. Claims 16-21 have been added for consideration.

Claims 1, 2, 4-10, and 12-15 stand rejected under 35 USC §112, first paragraph, as allegedly failing to comply with the written description requirement. In paragraph 5, the

Examiner has objected to specific language in claims 1 and 2. This language corresponds to that which is objected to in the specification and addressed above.

The objected to language has been deleted from claims 1 and 2. This language is fully supported by the original specification and is deleted merely for purposes of convenience. However, as will be explained below, the function described on page 2 of Applicant's Feb. 7, 2005 Amendment is inherent to the structure in each of claims 1 and 2.

The Examiner has made a number of rejections under 35 USC §112, second paragraph, in paragraph 6 of the Action. Applicant will address the alleged problems in the order that they appear.

The Examiner has objected to the language "particularly activated carbon" in claims 1 and 2. The claim language has been amended to address this alleged problem.

The Examiner has objected to the language in claim 1, lines 5 and 6. The subject phrase has been amended, but not as suggested by the Examiner. The language has been amended to clarify that the inner surface has a groove into which the mixture is formed or alternatively a tongue against which the mixture is formed.

The Examiner has objected to the language indicating that the respiratory filter can be operatively connected to a fan filter unit. However, the subject structure is a respiratory filter which in fact can be attached to either a respirator or fan filter unit. It is respectfully submitted that this language is not inconsistent in any of claims 1, 2, 4, 8, 9, 13 or 14, where alleged to be so by the Examiner.

The language relating to the "positive or non-positive" connection has been amended.

The preambles of claims 13 and 14 have been amended so there is now clear antecedent basis.

All pending claims stand rejected under 35 USC §103 as obvious over U.S. patent No. 5,817,263 (Taylor) in view of U.S. Patent No. 5,660,173 (Newton). Reconsideration of this rejection is requested.

The Examiner acknowledges that Taylor does not teach an inner surface with a complete or partial groove or tongue. Newton is relied upon by the Examiner for the alleged teaching of a connecting part with a complete or partial groove or tongue on an inner surface of the connecting part.

Newton describes a "dimpled surface 29". As stated in column 4, beginning at line 25, "[t]he dimples are formed of an irregular array of protuberances and depressions in the interior wall which are sized to approximately coincide with the size of the carbon particles adjacent thereto".

First of all, it should be noted that Newton does not teach or suggest the use of a meltable polymer as part of the mixture as recited in Applicant's claim 1. Instead, the carbon particles are loosely packed in the housing 1. The "dimpling" is alleged to "afford greater packing density" of the loose/unbound carbon particles (see Abstract).

The considerations associated with making a filter with loose particles and one having particles mixed with a meltable polymer are very different. Consequently, other than the fact that Taylor and Newton both relate to filtering structures, it would not be obvious to combine the teachings thereof, given the different considerations associated with their constructions.

Aside from this, even if one makes the combination, the “dimpled surface” that results from an “irregular array of protuberance and depressions” does not meet or suggest the language of claim 1; that being the complete or partial groove or tongue.

As Newton describes, the dimples 32, 34 are discrete and sized approximately to match the size of the particles in each layer. Accordingly, as can be seen in Fig. 2, the dimples 32, 34 are discrete and, as described, quite small.

On the other hand, applicant claims the complete or partial groove or tongue. *Webster's Ninth New Collegiate Dictionary* defines groove as “a long narrow channel or depression” (our emphasis). The significance of the groove or tongue having a substantial extent is that the flow of air at the interface, as described with respect to Figs. A-C, above, is controlled by the groove or tongue to avoid the phenomenon wherein the air migrates between the filter material and connecting parts so as to be essentially unfiltered as it reaches the user. It is respectfully submitted that Newton does not teach or suggest any structure that would accomplish this end.

Additionally, the complete or partial groove or tongue inherently adds integrity to the connection between the filtering material, with particles held together by a binder, and the connecting part, which is molded against. The discrete dimples and protuberances, particularly with loose, non-unified, carbon particles, do not contribute to the same structural integrity.

Accordingly, claim 1 is believed allowable.

New claim 16 depends from claim 1 and characterizes the groove or tongue as extending continuously substantially completely around the inner surface.

Newton states that the protuberances and depressions are in an “irregular array” (see column 4, lines 26). To modify Newton to have any continuous structure fully around an inner surface would be a complete departure from, and inconsistent with, the teachings of Newton.

Claim 2 is directed to a respiratory filter and includes limitations as discussed relative to claim 1, above, which are neither taught or suggested by the art cited by the Examiner. That is, claim 2 characterizes the connecting part as comprising an inner surface with a complete or partial groove or tongue, which the pressed molded piece engages in, or partially encloses.

Claim 17 depends from claim 2 and corresponds to claim 16, characterizing the groove or tongue as extending continuously substantially completely around the inner surface.

The remaining claims depend directly or indirectly from one of claims 1 or 2 and recite further significant limitations to further distinguish over the cited art.

Claim 18 depends from claim 2 and characterizes the connecting part as comprising a periphery with at least one fastener thereon for a substantially gastight connection to an adapter for connection to a respirator or a fan filter unit.

Newton teaches the formation of a filtering component directly in a corresponding adapter. On the other hand, the recited structure in claim 18 contemplates pre-forming an integrated component consisting of the connecting part and filtering material, which is separate from and subsequently attached to, an adapter, such as that in Newton, which

in turn is connected to a respirator, or the like. Newton does not teach or suggest any type of pre-formed, connectable filtering component.

The Examiner suggests that it is inherent in Taylor's filter that it will be placed in a housing which is connected to a respirator or fan filter (page 6 of the Action, in lines 1-3). It is respectfully submitted that neither Taylor nor Newton teaches or suggests the concept of pre-forming a component, consisting of a connecting part and filtering material, and connecting that pre-formed component to an adapter, which in turn is connected to a respirator or other structure.

The requirement of an adapter, to which the connecting part with the filtering material is attached, is in each of claims 6, 9, 10, 14 and 18-21.

Claim 12 specifically characterizes the connecting part as a ring-shaped connecting part. The art lacks a corresponding connecting part, which further distinguishes over the prior art by the characterization "ring-shaped".

Claim 15 recites the steps of heating the mixture under pressure in the connecting part during the step of molding the mixture and thereafter connecting the connecting part to an adapter that is in turn connected to a respirator or fan filter unit.

The prior art does not teach or suggest the pre-forming of a filter component consisting of a filtering material and a connecting part that is thereafter connected to an adapter, that is in turn releasably connected to a respirator or fan filter unit. Through this arrangement, the connecting part, which is used to mold the filtering material, becomes integrated into the respirator filter, obviating the need to remove the formed filtering material from a mold.

Reconsideration of the rejection of claims 1, 2, 4-10, and 12-15, favorable consideration of new claims 16-21, and allowance of the case are requested.

Respectfully submitted,

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